

Interactive comment on “Modeling postfire water erosion mitigation strategies” by M. C. Rulli et al.

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Dear author, I found your paper a good contribution to understand the post-fire soil erosion processes, and to contribution to a better understanding of the fire affected land. Your paper show us that after forest fire there are some chances to control the soil losses. My comment focus on the idea that rehabilitation and restoration strategies are not always necessary. Most of our ecosystems are adapted to the fires and the recovery is done by nature. I expect that your paper will help policy makers to understand this. And also they must understand that some mitigation strategies can damage the natural recovery. We are plenty of examples in the Mediterranean for the last 60 years. Also, I would like to suggest to make references to the long time measurements that help us to understand the effect of fires at long-time periods. This can be seen in our paper Cerdà, A. & Doerr, S.H. (2005) Influence of vegetation recovery on soil hydrology and erodibility following fire: an eleven-year investigation. International Journal of Wildland Fire, 14(4), 423-437. This paper show that the recovery of the Mediterranean Lands can be done without any human interference. Another interesting question I wish to comment is the impact of ash on the immediately post-fire erosion as they can control and mitigate the soil losses. We found that ash (specially when covered with needles) can protect the soil, and this is a natural mitigation strategy that use to be avoided. Researches in this topic can be found in Cerdà, A. y Doerr, S.H. 2008. The effect of ash and needle cover on surface runoff and erosion in the immediate post-fire period. Catena, 74 , 256- 263. doi:10.1016/S0341-8162(02)00027-9. This means that immediately after fire the soil losses can be low as we measured in the field. And this is still not understood by the post-fire management strategies. Many thanks for showing the importance of fire and their effects on the Earth System Congratulations for your excellent contribution Sincerely

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